

PROJECT NUMBER: 3013-60-7583

PAGE: 1 of 4
DATE: July 15, 1996

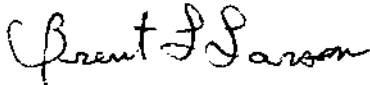
MAXIM TECHNOLOGIES, INC./TWIN CITY TESTING
662 Cromwell Avenue
St. Paul, Minnesota 55114

**INTERFACE BODY CONTACT PRESSURE TEST
BRODA SEMI-RECLINER
MODEL 35V 20"**

Prepared for:
BRODA SEATING
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The test results contained in this report pertain only to the samples submitted for testing and not necessarily to all similar products.

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INTERFACE BODY CONTACT PRESSURE TEST

INTRODUCTION:

This report documents the results of interface body contact pressure testing conducted on a Broda Semi-Recliner (Model No. 35V 20") manufactured and submitted by Broda Seating. This analysis was requested by Mr. Steve Brotherston of Broda on June 5, 1996 with the testing conducted June 27, 1996.

TEST RESULTS SUMMARY:

**Average Pressure (mm Hg)-All Subjects (3)
(Standard Deviation Values in Parentheses)**

<u>Position</u>	<u>Recliner Upright Position</u>	<u>Recliner Reclined Position</u>	<u>Wheelchair (for comparison)</u>
Right Ischial Tuberosity	38 (20.0)	24 (8.4)	64 (30.3)
Left Ischial Tuberosity	34 (16.2)	25 (7.5)	72 (32.3)
Sacral Prominence	40 (16.5)	23 (11.5)	65 (35.3)
Right Thigh	33 (7.8)	16 (7.3)	37 (10.5)
Left Thigh	35 (7.0)	17 (7.0)	36 (12.0)

It is the policy of Maxim Technologies, Inc. to use recognized test procedures whenever possible, such as ASTM, ANSI, ISO etc. To Maxim's knowledge, no standard procedure exists for interface body contact pressure testing at the present time. The test method employed for this analysis is based on sound laboratory practice. Precautions were employed to position the sensor correctly in each case. The pressure monitor was calibrated before and after each series of measurements.

SAMPLE IDENTIFICATION:

The production health care seating system submitted for evaluation was identified as a Model 35V 20", Serial Number 1101-2835V09-6N manufactured by Broda Seating. The semi-recliner system is designed for long term health care.

The chair seat tilted from flat to 23 degrees from horizontal and the chair back reclined from 97 to 134 degrees from the angle of the seat. These changes are accomplished by two independent gas cylinders and were infinitely adjustable within these ranges. These cylinders were reported to be intended as shock absorbers for agitated patients who have incessant choreiform movement.

The chair seat back and leg rests consisted of 1 1/2" wide x 1/8" thick vinyl strapping, with gaps between the strapping to allow for drainage and air circulation.

PROJECT NUMBER: 3013 60-7583

PAGE: 3 of 4

DATE: July 15, 1996

This unit was equipped with wing and side pads as well as a foot cushion. The padding consisted of expanded virgin vinyl with 100% soft backing. A 1" thick seat pad covered with an antibacterial, vented with fabric and a cotton terri-cloth cover completed the Recliner.

TEST PROCEDURE:

A Talley Oxford Pressure Monitor - Model MKII was used for this analysis. The recliner was evaluated in the upright as well as in the reclined mode. The subjects used were of various heights and weights and tested three times each at various body locations. The subjects were dressed in an appropriate size cotton sweat suit with no shoes to ensure proper placement of the 4" x 5" - 12 sensor pad. Positioning of the sensor pad was accomplished by both the subject and experimenter. Repositioning between the three replications conducted on each subject was also part of the test procedure. The subjects weight, height and gender are listed below:

TEST PROCEDURE (continued):

<u>Subject</u>	<u>Height</u>	<u>Weight</u>	<u>Sex</u>
1	5' 5"	130 lbs	F
2	5' 7"	125 lbs	F
3	6' 1"	190 lbs	M

TEST RESULTS:

Average Pressure (mm Hg)-Individual Subjects

Recliner - Upright Position

	<u>Subject 1</u>	<u>Subject 2</u>	<u>Subject 3</u>	<u>Average</u>	<u>Std. Deviation</u>
Right Ischial Tuberosity	38	24	53	38	(20.0)
Left Ischial Prominence	31	22	50	34	(16.2)
Sacral Prominence	35	27	58	40	(16.5)
Right Thigh	35	35	29	33	(7.8)
Left Thigh	41	36	29	35	(7.0)

Recliner - Reclined Position

	<u>Subject 1</u>	<u>Subject 2</u>	<u>Subject 3</u>	<u>Average</u>	<u>Std. Deviation</u>
Right Ischial Tuberosity	24	18	31	24	(8.4)
Left Ischial Tuberosity	22	24	30	25	(7.5)
Sacral Prominence	15	23	30	23	(11.5)
Right Thigh	11	16	19	16	(7.3)
Left Thigh	9	20	21	17	(7.0)

PROJECT NUMBER: 3013 60-7583

PAGE: 4 of 4
DATE: July 15, 1996

Standard Wheel Chair (No Padding)

	<u>Subject 1</u>	<u>Subject 2</u>	<u>Subject 3</u>	<u>Average</u>	<u>Std. Deviation</u>
Right Ischial Tuberosity	73	50	68	64	(30.3)
Left Ischial Tuberosity	73	51	92	72	(32.3)
Sacral Prominence	49	65	82	65	(35.3)
Right Thigh	27	44	39	37	(10.5)
Left Thigh	28	41	39	36	(12.0)

REMARKS:

The maximum value was obtained from the 12 individual sensors and the results of all subjects averaged.

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